

## LESSON PLAN

### Unit 16. HAZMAT/OPERATIONAL RISK MANAGEMENT

**X-XXX-XXX2 Rev B**

#### Topic 16.2 Operational Risk Management

CLASS PERIODS: 1

LAB PERIODS: 0

#### Enabling Objectives:

13.4 **IDENTIFY** the importance of Operational Risk Management (ORM) in accordance with Operational Risk Management, OPNAVINST 3500.39

13.5 **IDENTIFY** ORM principles in accordance with Operational Risk Management, OPNAVINST 3500.39

#### Trainee Preparation Materials:

##### A. Trainee Support Materials:

1. None

##### B. Reference Publications:

1. None

#### Instructor Preparation:

##### A. Review Assigned Trainee Material

##### B. Reference Publications:

1. Operational Risk Management (ORM), OPNAVINST 3500.39

##### C. Training Materials Required:

1. Transparencies
  - a. 5-Step Process, 16-2-12
  - b. Causes of Risk, 16-2-5
  - c. Control, 16-2-11
  - d. Hazard, 16-2-6
  - e. Mishap/Accident Definitions, 16-2-4
  - f. Operational Risk Management (ORM), 16-2-1
  - g. Operational Risk Management (ORM) Definition, 16-2-2
  - h. Operational Risk Management Theory, 16-2-3
  - i. Probability, 16-2-9
  - j. Risk, 16-2-7
  - k. Risk Assessment, 16-2-10
  - l. Severity, 16-2-8
  - m. Summary, 16-2-13

## LESSON PLAN

### Unit 16. HAZMAT/OPERATIONAL RISK MANAGEMENT

X-XXX-XXX2 Rev B

#### Topic 16.2 Operational Risk Management

##### DISCUSSION POINT

###### 1. Introduction

##### RELATED INSTRUCTOR ACTIVITY

###### 1. Establish Contact.

Write name on VAP board.

Introduce Yourself.

Sailors work in a hazardous environment. Wherever we are stationed, ashore or afloat, many of our tasks involve the risk of equipment damage, injury, or death. ORM is a systematic process to evaluate the risks associated with a task and reduce the probability of a mishap.

State Lesson Objectives.

Reference Operational Risk Management (ORM), OPNAVINST 3500.39.

###### 2. Operational Risk Management (ORM)

###### 2. Show Transparency 16-2-1, Operational Risk Management (ORM).

- a. The process of dealing with risk associated with military operations, which includes:

- a. Show Transparency 16-2-2, Operational Risk Management (ORM) Definition.

## LESSON PLAN

### Unit 16. HAZMAT/OPERATIONAL RISK MANAGEMENT

X-XXX-XXX2 Rev B

#### Topic 16.2 Operational Risk Management

##### DISCUSSION POINT

##### RELATED INSTRUCTOR ACTIVITY

- (1) Risk assessment
  - (2) Risk decision making
  - (3) Implementation of effective controls
- b. Operational Risk Management Concept:
- (1) Used as a decision making tool to increase operational effectiveness by anticipating hazards and reducing the potential for loss
  - (2) Used to increase our ability to make informed decisions by providing the best baseline of knowledge and experience available
  - (3) Minimizes risk to acceptable levels equal with mission accomplishment

## LESSON PLAN

### Unit 16. HAZMAT/OPERATIONAL RISK MANAGEMENT

X-XXX-XXX2 Rev B

#### Topic 16.2 Operational Risk Management

##### DISCUSSION POINT

c. ORM Theory:

- (1) Accept risk when benefits outweigh the cost
- (2) Accept no unnecessary risk
- (3) Anticipate and manage risk by using the planning process
- (4) Make risk decisions at the right level

d. Mishap/Accident Definitions:

- (1) Accident - implies that incident was not preventable. "act of God"

##### RELATED INSTRUCTOR ACTIVITY

- c. Show Transparency 16-2-3, Operational Risk Management Theory.

- d. Show Transparency 16-2-4, Mishap/Accident Definitions.

## LESSON PLAN

### Unit 16. HAZMAT/OPERATIONAL RISK MANAGEMENT

X-XXX-XXX2 Rev B

#### Topic 16.2 Operational Risk Management

##### DISCUSSION POINT

- (2) Mishap - better term to describe an incident which could of been prevented
  
- e. Causes of Risk:
  - (1) Resource constraints - such as not enough people to complete the assignment safely
  - (2) New technology - such as a new electronic system installed onboard your ship
  - (3) Complex evolutions - such as refueling at night
  - (4) Stress - such as long hours on watch
  - (5) Feeling of "invincibility" - such as the ignorance of youth

##### RELATED INSTRUCTOR ACTIVITY

- (2) NOTE: Most incidents in the Navy which result in injury or death fall into the mishap category.
  
- e. Show Transparency 16-2-5, Causes of Risk.

## LESSON PLAN

### Unit 16. HAZMAT/OPERATIONAL RISK MANAGEMENT

X-XXX-XXX2 Rev B

#### Topic 16.2 Operational Risk Management

##### DISCUSSION POINT

##### RELATED INSTRUCTOR ACTIVITY

f. Terms:

(1) Hazard - a condition with the potential to cause personal injury or death, property damage, or mission degradation

(1) Show Transparency 16-2-6, Hazard.

(a) Driving your car

(b) Surfing at the beach

(2) Risk - an expression of possible loss in terms of severity and probability

(2) Show Transparency 16-2-7, Risk.

(a) Collision

(b) Accident

## LESSON PLAN

### Unit 16. HAZMAT/OPERATIONAL RISK MANAGEMENT

X-XXX-XXX2 Rev B

#### Topic 16.2 Operational Risk Management

##### DISCUSSION POINT

- (3) Severity - the worst credible consequence which can occur as a result of a hazard
  - (a) Death
  - (b) Injury
- (4) Probability - the likelihood that a hazard will result in a mishap or loss
  - (a) How often car accidents occur
  - (b) Weather conditions
- (5) Risk Assessment - the process of detecting hazards and assessing associated risks
  - (a) When is it more likely to occur?

##### RELATED INSTRUCTOR ACTIVITY

- (3) Show Transparency 16-2-8, Severity.
- (4) Show Transparency 16-2-9, Probability.
- (5) Show Transparency 16-2-10, Risk Assessment.

## LESSON PLAN

### Unit 16. HAZMAT/OPERATIONAL RISK MANAGEMENT

X-XXX-XXX2 Rev B

#### Topic 16.2 Operational Risk Management

##### DISCUSSION POINT

##### RELATED INSTRUCTOR ACTIVITY

(b) Where would it be more severe?

(6) Control - a method for reducing risk for an identified hazard by lowering the probability of occurrence, decreasing potential severity, or both

(6) Show Transparency 16-2-11, Control.

(a) Using seat belts, avoid driving during rush hours or after bars close etc...

(b) Knowledge of surface requirements

#### 3. Operational Risk Management Principles

a. Systematic process of evaluating hazards/risks and developing methods to reduce the risk to Sailors and equipment

b. Use the five step process to:

b. Show Transparency 16-2-12, 5-Step Process.



## LESSON PLAN

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X-XXX-XXX2 Rev B

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##### DISCUSSION POINT

##### RELATED INSTRUCTOR ACTIVITY

- (1) Identify Hazards
  - (a) Begin with an outline of the major steps in the operation (operational analysis)
  - (b) Conduct a Preliminary Hazard Analysis by listing all of the hazards associated with each step along with possible causes for those hazards
- (2) Assess Hazard - for each hazard identified, determine the associated degree of risk in terms of probability and severity
- (3) Make Risk Decisions - by developing risk control options
  - (a) Start with the most serious risk first and select controls that will reduce the risk to a minimum consistent with mission accomplishment

## LESSON PLAN

### Unit 16. HAZMAT/OPERATIONAL RISK MANAGEMENT

X-XXX-XXX2 Rev B

#### Topic 16.2 Operational Risk Management

##### DISCUSSION POINT

##### RELATED INSTRUCTOR ACTIVITY

- (b) Decide if the benefit of the operation outweighs the risk
- (c) Communicate with higher authority in the chain of command
  - 1) If the risk outweighs benefit
  - 2) If assistance is required to implement controls
- (4) Implement Controls - used to eliminate hazards or reduce the degree of risks with:
  - (a) Engineering Controls - the use of engineering methods to reduce risks by
    - 1) Design

## LESSON PLAN

### Unit 16. HAZMAT/OPERATIONAL RISK MANAGEMENT

X-XXX-XXX2 Rev B

#### Topic 16.2 Operational Risk Management

##### DISCUSSION POINT

##### RELATED INSTRUCTOR ACTIVITY

- 2) Material selection
- 3) Substitution
- (b) Administrative Controls - the use of warning labels, markings, written policies, and personnel training to recognize hazards
- (c) Personal Protective Equipment (PPE)
  - 1) Serves as a barrier between personnel and a hazard
  - 2) Should be used when other controls do not reduce the hazard to an acceptable level
- (5) Supervise

## LESSON PLAN

### Unit 16. HAZMAT/OPERATIONAL RISK MANAGEMENT

X-XXX-XXX2 Rev B

#### Topic 16.2 Operational Risk Management

##### DISCUSSION POINT

##### RELATED INSTRUCTOR ACTIVITY

- (a) Conduct follow-up evaluations of the controls to ensure they remain in place and have the desired effect
- (b) Monitor for changes which may require further Operational Risk Management
- c. This program also pertains to logical thinking every moment. It makes you decide whether what you are doing is worth the risk or if there is a better solution.

#### 4. Summary

4. Show Transparency 16-2-13, Summary.

a. Operational Risk Management (ORM)

b. Operational Risk Management Principles

#### 5. Assignment

## LESSON PLAN

### **Unit 16. HAZMAT/OPERATIONAL RISK MANAGEMENT**

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##### **DISCUSSION POINT**

##### **RELATED INSTRUCTOR ACTIVITY**

a. None

6. Evaluation

a. None